YEVDOKIMOVA, A.I.; SOROCHENKO, A.A.

Plastics based on ethylcellulose and butyrate acetate cellulose.
Biul.tekh.-ekon.inform. no.1:10-12 '59. (MIRA 12:2)
(Plastics) (Cellulose)

87652

S/191/60/000/003/001/013
B016/B054

15.8000

AUTHORS: Pechenkin, A. L., Yevdokimova, A. I., Sorochenko, A. A.

TITLE: Plastics (Etrols) on the Basis of Cellulose Esters

PERIODICAL: Plasticheskiye massy, 1960, No. 3, pp. 2-8

TEXT: The authors report on their study of compositions and applications of etrols. 1) Acetobutyrate cellulose etrol (ABCE). Resistance to water and frost, and compatibility with plasticizers increase with increasing content of butyryl groups in this ester, while its heat resistance decreases. The physicomechanical characteristics as dependent on the plasticizer used are given. Hence, the authors conclude that, among all plasticizers studied, dibutyl sebacinate offers the strongest resistance to frost. Triphenyl phosphate gives a higher hardness and strength in static bending. Dioctyl phthalate gives better characteristics of resistance to heat and toughness. The following plasticizers were also tested: dibutyl phthalate, dioctyl sebacinate, tricresyl phosphate, dibutyl adipinate, and ЕД-242 (YeD-242). Salol, as well as mixtures of resorcinol dibenzoate with 1,3,5-tritertiary butyl phenol

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Plastics (Etrols) on the Basis of Cellulose Esters

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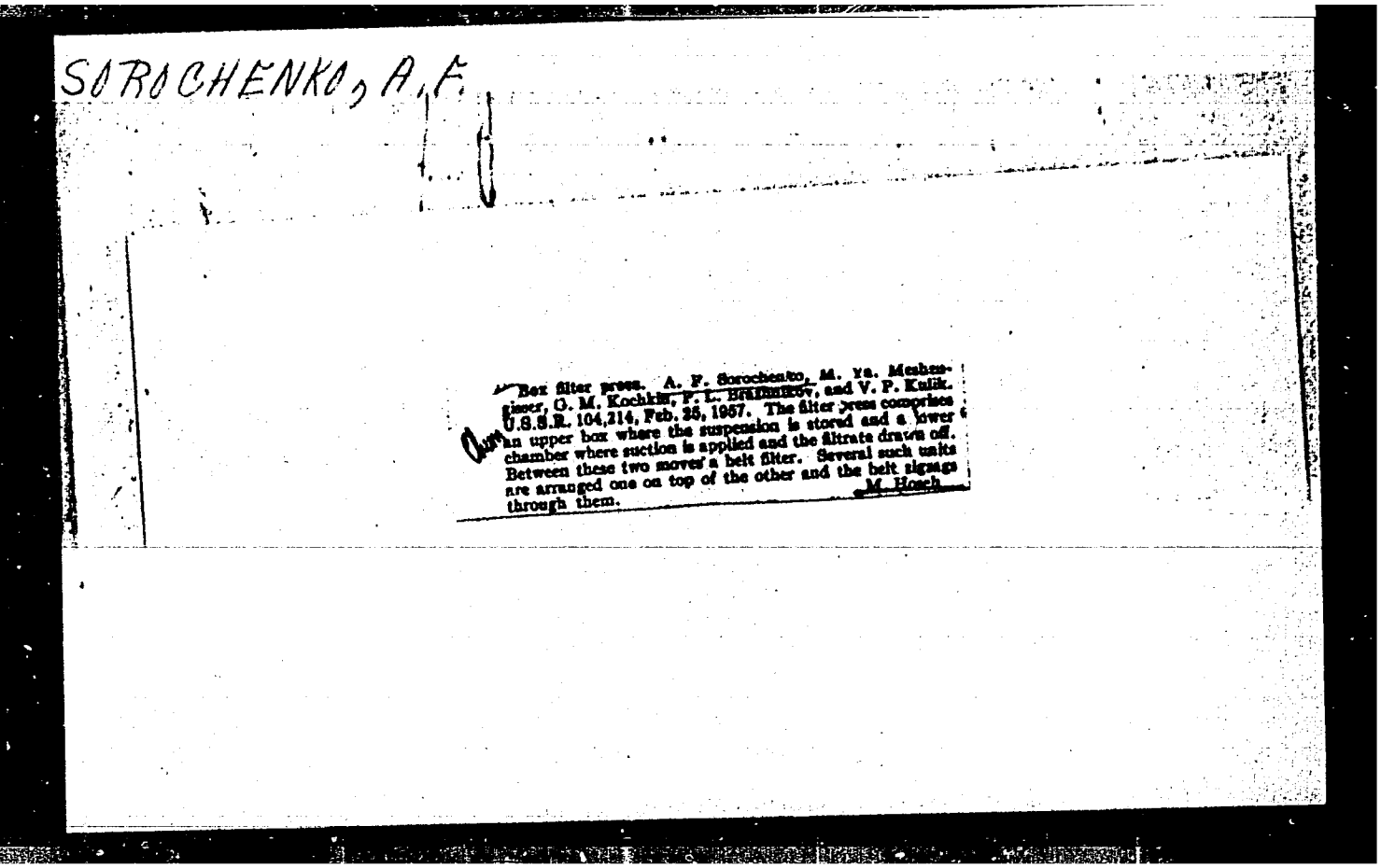
(П-23, P-23), and of salol with P-23, proved to be the most efficient stabilizers. Besides, the authors studied: p-octyl phenol, p-amyl phenol, resorcinol disalicylate, and resorcinol dibenzoate. The authors give the physicomechanical characteristics of four ABCE types developed by NIIPP (Scientific Research Institute of Plastic Products): АБЦЭ-45-20 (ABTsE-45-20) and АБЦЭ-38-20 (ABTsE-38-20), both for lining steering wheels and for the production of small workpieces; АБЦЭ-38-12 (ABTsE-38-12) and АБЦЭ-45-8 (ABTsE-45-8) for the production of thin-walled workpieces without reinforcement and larger parts of motor vehicles in temperate and tropical climates. This substance is also suited for the radio industry, for the production of musical instruments, spectacle frames, incombustible toys, and the like. 2) Acetopropionate-cellulose and tripropionate-cellulose etrols, as compared with ABCE plastics, have better mechanical properties, resistance to heat and water, can be easily dyed with various colors, and have a more decorative look. Best plasticizers for them were: mixtures of dibutyl phthalate and dioctyl phthalate. The following types were tested: АПЦЭ-48-30 (APTsE-48-30); -48-15; -33-30; -33-20; ТПЦЭ-64-20 (TPTsE-64-20), and -64-15. They are suited for the production of motor-vehicle parts, door handles, radio

Sorochenko, A. F.

Frame filter press. A. F. Sorochenko, M. Ya. Meshengisser, G. M. Kochkin, P. L. Brazhnikov, and V. P. Kulik. U.S.S.R. 104,156, Nov. 25, 1956. M. H. 5



SOROCHENKO, A. F.

Box filter press. A. F. Sorochenko, M. Ya. Meshcheryakov, O. M. Kochkin, P. L. [illegible]ov, and V. P. Kulik. U.S.S.R. 104,214, Feb. 25, 1957. The filter press comprises an upper box where the suspension is stored and a lower chamber where suction is applied and the filtrate drawn off. Between these two movers a belt filter. Several such units are arranged one on top of the other and the belt zigzags through them.

M. Hosch

82774

SOV/184-59-5-1/17

5.1120

AUTHORS: Sorochenko, A.F., Korobchanskiy, O.A., Engineers

TITLE: An Automatic Filtering Centrifuge With Sediment Removal by a Knife

PERIODICAL: Khimicheskoye mashinostroeniye, 1959, Nr. 5, pp. 1-3 (USSR)

ABSTRACT: The first industrial model of the "АГ-1,200-2У" (AG-1,200-2U) filtering centrifuge with sublayer regeneration by outside washing is described. The centrifuge was manufactured at the imeni Frunze plant in Sumy. It was tested on the regeneration of foundry loam under unfavourable conditions, because the pulp had a clay component and the sand had sharp edges. In the standard periodic action automatic filtering centrifuges the sediment cannot be removed entirely by a knife. The authors designed a special rotor and a sublayer regeneration device for centrifuging suspensions with both soluble and insoluble solid phases. The filtering base is a shell formed by a helically wound wire of trapezoidal cross-section having a clearance of 0.2-0.3 mm between wires. This sieve is fixed in the rotor (Fig. 2). The regeneration of the filtering base and the sublayer is performed by a strong water jet directed from outside to the rotor. The water sprayer moves reciprocally parallel to the rotor axis. The servomotor and the water supply are switched on by

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An Automatic Filtering Centrifuge With Sediment Removal by a Knife

relays. Tests were carried out on the "АГ -600" (АГ-600) semi-industrial centrifuge, confirmed the possibility of separating the molding loam suspension under conditions of full automation. Figure 6 shows an operational diagram of the АГ-1200-2У centrifuge. The washed sand passes from the classifier into the container with a mixer (1) placed 1,5 m above the feed pipe of the centrifuge (2). The pulp is fed to the centrifuge through an automatic charging valve (3) in the bottom of the container. The separated liquid and the washing water are drained through a common pipeline into the settling tank. The centrifuge worked under the following conditions: RPM - 430; sandlayer thickness - 85 mm; sublayer thickness - 8 mm; pulp composition: sand - 68%, clay - up to 2%, the rest was water; water pressure for regeneration in the sprayer - 6 kg/cm^2; the removal of the fine solid phase with the separated liquid - 23.5 g/l. The different phases of one operating cycle of the centrifuge were: charging - 20 sec, centrifuging - 60 sec, discharging - 25 sec, regeneration of the sublayer - 60 sec, total - 2 min, 45 sec. The efficiency of the centrifuge was 4,600 kg/hour of sand dried to a humidity of 3.8 - 4.8%. Characteristics of the centrifuge are: rotor diameter - 1,180 mm; rotor speed - 430 rpm; electricmotor -

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An Automatic Filtering Centrifuge With Sediment Removal by a Knife

10 kw; rotor volume - 240 l; weight of the centrifuge - 7,600 kg. During 100 hours of industrial tests the knife and the comb of the level regulator (easily removable steel parts with a hard alloy surface) had to be exchanged once. Other parts exposed to the pulp had no noticeable wear. The relatively low speed of the rotor is sufficient for the purpose described because of the good filtrability of sand. For centrifuging intermediate products of the plastics production, e.g. polyvinyl chloride resin suspensions, polyethylene and others, the rotor speed can be increased to the values necessary for each particular case and the liquid pressure for regeneration can be increased to 8-10 kg/cm^2. There are 2 photographs, 2 diagrams and 2 graphs.

Card 3/3

[illegible], [illegible] --

"[illegible] of the Effect of [illegible] on Infusoria, [illegible]." Cand [illegible] Sci, Arkhangel'sk Medical Inst, Arkhangel'sk, 195[illegible].
([illegible], No 2, Sep 54)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (10)

SO: Sum. No. 4[illegible]1, 5 May 55

Meteorological Abst.
Vol. 4 No. 8
Aug. 1953
Part 1
Pressure and Wind

551.558

4.8-157 Bulavko, A. C. and Sorochenko, N. K. Voskhodiashchie vozdushnye potoki redkoi sily. [Vertical air current of unusual force.] Meteorologiia i Gidrologiia, No. 7:28-30, 1952. DLC--Two parachutists were dropped over the Borisov Region (Minsk province) at 5:30 p.m. of August 1, 1950 and landed, the first after 40 min, and the second after 2 hrs. The probable lift of the second one is assumed to be 3 km. The region was located in an area of diffused pressure field, with secondary cold front passing by and powerful cumulus clouds. The two layers of cumulus had bases at about 1200 m and 3100 m. Air temperature near the soil surface was 18-20°C, lapse rate was 0.7-08°. Thunder activity was registered in the region from afternoon to 8-9 p.m. Subject Headings: 1. Vertical currents 2. Borisov Region. U.S.S.R.--N.T.Z.

SOROCHENKO, P.

Two hundred houses for collective farmers. Sil'. bud. 7 no.5:4-6 My '57. (MIRA 13:6)

1. Predsedatel' soveta mezhkolkhoznoy stroitel'noy organizatsii No.1 Cherkasskogo rayona, Cherkasskoy oblasti.
(Cherkassy District--Farmhouses)

SOROCHENKO, P.

How we achieved success in our work. Sil'.bud. 8 no.2:7-8 F '58. (MIRA 13:7)

1. Predsedatel' soveta Cherkasskoy mezhkolkhoznoy stroitel'noy organizatsii No.1 Cherkasskoy oblasti.
(Cherkassy Province--Building)

SOROCHENKO, R. L.

USSR/Astronomy - Radio Astronomy Nov/Dec 53

"Interference Radio Telescope," V.V. Vitkevich and R.L. Sorochenko, Phys Inst im Lebedev, Acad Sci USSR

Astron Zhur, Vol 30, No 6, pp 631-635

Discusses an antenna system consisting of a series of separate antennas of small dimensions and coupled electrically. He compares this diagram of radio reception to optic interference pattern by a diffraction grid. Considers this system as more advantageous than others. Rec 20 Apr 53.

273T75

Category : USSR/Radiophysics - Application of radiophysical methods I-12

Abs Jour : Ref Zhur - Fizika, No 1, 1957 No 2008

Author : Chikhachev, B.M., Sorochenko, R.L.
Title : Apparatus for the Observation of the 21-cm Hydrogen Radio-Wave Spectral Line

Orig Pub : Tr. 5-go soveshchaniya po vopr. kosmogonii. 1955, M., AN SSSR, 1956, 546-549, diskus. 550-553

Abstract : The apparatus is based on the principle of the frequency radiometer with double frequency conversion. A balanced method is used, in which two narrow-band filters separated in frequency and two second heterodynes alternately switched at a modulation frequency of 360 cycles, are connected to the output of the second i-f stage. In this case, oscillations from one of two fixed portions of the spectrum under investigations are alternately passed through each filter. The difference in the intensity of the noise at the output of the filters is separated by a balanced detector. The a-c component at the modulation frequency appears at the output of the balanced detector only in that case, when the spectral densities of the noise in the fixed portions differ from each other. The search for the line is effected by varying the frequency of the first heterodyne. The frequencies of the first and second heterodynes and the narrow-band filters are crystal-stabilized. The accuracy of the measurement of the line frequency is 1.5 kc. The sensitivity

Card : 1/2

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A105/A026

6,4200

AUTHOR: Sorochenko, R.

TITLE: Conversation Over 100 Light Years

PERIODICAL: Znaniye-Sila, 1960, No. 8, pp. 6-7

TEXT: A new field of science - radioastronomy - started its stormy development. Standing in the middle between radio-physics and astronomy it may, besides astronomic problems, solve the riddle whether there is life in other parts of the Universe. The first step toward this aim is to get signals from the Universe; an artificial signal, not a natural one. Radioelectromagnetic tests lately proved that space surrounding the earth intensively emits waves, the intensity increasing with the length of the wave. The most favorable wave for cosmic radiocommunications seems to be the length between 3 and 30 cm. Within this range there is the 21 cm wave being of major importance in radioastronomy, because this wave is used for transmission by interstellar hydrogen. Every atom of hydrogen is a midget radiotransmitter, emitting a "portion" of electromagnetic energy of fixed magnitude, the frequency being conditioned by the inner structure. The intensity of this transmission is not too high and may easily be covered by an artificial signal. Hydrogen is the most abundant element in the Universe. Not

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Conversation Over 100 Light Years

long ago, American scientists logically presupposed that if there should exist a civilized community somewhere on other planetary systems investigating space, it would draw the same conclusions and consequently choose a 21 cm wave for communication; furthermore, if such civilized community is in possession of a system of guided transmission into all directions, it could get a contact with our solar system. As for the range, the level of our electrotechnical knowledge permits realizing contact over a distance of 100 light years. Some months ago, an outstanding radiotechnical experiment has been accomplished by radiolocating the planet Venus. In this experiment a transmitter sending 265 kw waves was used. An immense anterna was concentrating waves into a beam directing them to Venus. Thus, the efficiency of transmission was amplified more than seven thousand times, i.e., two million kw. Special receivers for weak signals achieved an enormous sensitivity. They work with huge antennas collecting signals on an area of thousands of km^2. Amplification of the received signal is done by special molecular and parametric devices. Inside the sphere with a radius of 100 light years there are about ten thousand stars. Only few of them have planetary systems, and consequently, a basis for the existence of life. There is some probability that at least one of these stars has a civilized community with a highly developed culture and technical science. In the USA, a special apparatus is under construction at present for experimental transmission of signals on 21 cm

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S/020/60/132/01/21/064
B014/B014

AUTHORS: Vitkevich, V.V., Kuz'min, A.D., Sorochenko, R.L., Udal'tsov, V.A.

TITLE: Radioastronomical Observations of the Second Soviet Cosmic Rocket

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 132, No. 1, pp. 85-88

TEXT: The frequently used method of radiointerference was employed for observing radio signals of the second Soviet cosmic rocket. The angular coordinates of the container were measured by means of the scientific instruments, furthermore the power of the signals received and its variations with time. A buzzer signal was used because of the increased stability of the instruments, the first and second heterodyne were stabilized by means of quartz. The distance between the antennas of the radiointerferometer, which were directed to the east, was 175.9 m. The angle between the perpendicular on the line connecting the antennas and the direction to the signal source was measured by means of the radiointerferometer. Formula (1) is given for the determination of this angle, and formula (3), in which the Doppler effect is considered, is derived for the azimuth of the signal source. The radiointerferometer is adjusted according to

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Radiocastronomical Observations of the Second Soviet Cosmic Rocket

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the intensity of cosmic radio sources. This system permitted exact determination of the moment at which the Soviet rocket hit the Moon, as well as of the place at which the container is located. Fig. 1 shows a copy of the recorded signal in the final stage of the rocket's flight to the Moon. It is shown that the recording lost its sinusoidal character (caused by interferences) as soon as the container hit the Moon. The rocket reached the Moon on September 14, 1959, 0 h 2 min 22 sec. The place of the container was established from formula (3) and is shown in Fig. 3. The power of the signal received was determined by comparing it with the intensity of the cosmic radio source of Cygnus-A. Fig. 3 further illustrates recordings made during the last days before the arrival of the rocket on the Moon. Periodic intensity variations of 45 seconds, 45 minutes, and 10 - 13 minutes were observed. In this connection the authors refer to the periodic variation in the orientation of the container and to the Faraday effect detected in the ionosphere. There are 3 figures, 1 table, and 8 references, 7 of which are Soviet.

ASSOCIATION: Fizicheskiy institut im. P.N. Lebedeva Akademii nauk SSSR (Physics Institute imeni P.N. Lebedev of the Academy of Sciences of the USSR)

Card 2/3

26658
S/560/61/000/007/002/010
E032/E114

3.2300 (1062, 1080)

AUTHORS: Vitkevich, V.V., Kuz'min, A.D., Sorochenko, R.L., and Udal'tsov, V.A.

TITLE: Results of radio-astronomical observations obtained with Soviet space rockets

PERIODICAL: Akademiya nauk SSSR. Iskusstvennyye sputniki Zemli, No.7, Moscow, 1961, pp. 23-31

TEXT: An important problem in satellite and rocket experiments is the determination of the coordinates of the space vehicles. Since the satellites and rockets usually carry a stabilized transmitter, the problem is reduced to the determination of the position of the radio source and is analogous to the radio-astronomical problem of the determination of the angular coordinates of discrete sources. Such determinations are usually carried out by the radio-interferometer method. The present authors have used this method in the observation of the radio signals from the first, second and third Soviet space rockets. The use of radio astronomical methods has enabled them to measure the intensity of the signals as well. The observations were carried out on 183.6 Mc/s. The apparatus and the experimental

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method employed are described by the present authors in Ref.1 (Radiotekhnika i elektronika, 1961). The impact of the second space rocket container on the lunar surface occurred on September 14, 1959, at 0 hr 02 min 22±1 sec (this time is corrected for the time of propagation of the signal). The selenographic coordinates of the centre of the region of impact were found to be: latitude 30°, longitude -3° (crater Archimedes). During the observations of the first and second space rockets use was made of antennas with horizontal polarization. It is clear from the records obtained that in addition to a "quasi-sinusoidal" intensity variation due to interference there were also faster changes, which were apparently due to the rotation of the container. The period of these changes was 30-50 sec for the first and 40-60 sec for the second rocket. Comparisons of the records of signals from Soviet space rockets with those for known discrete sources of radio emission were used to estimate the intensity of the signal throughout the entire period of observations. The Cyg A source was used for the comparison. Figs. 4 and 5 show the variations in the intensity of the signals (slow component) in units of the power reduced to an isotropic emitter at the distance of the

rocket. A consideration of these curves shows that in addition to the fast changes mentioned above there were also slower variations in the signal from the first space rocket (characteristic periods 8-12 min and 40-60 min). In the case of the second rocket there was a period of 45 min reducing to 10-13 min. These changes may be due to the rotation of the container and the Faraday effect in the earth's atmosphere. In the case of the third rocket antennas with both horizontal and vertical polarization were employed. Typical records are reproduced. Analysis of the intensity records with two mutually perpendicular polarizations showed that there was signal fading on October 4, 5, 6, 12 and 17, 1959, with a period of about 3 min. In addition there was a signal variation reducing the amplitude to about 50% which had a period of about 1.5 min. These variations are apparently due to the rotation of the automatic inter-planetary station. There was some evidence that there was a further variation with a period of 20-30 min, and this may be due to the Faraday effect. The energy flux p was calculated from the expression

$$p = j\Delta f\, m$$

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where j is the energy flux from a discrete source with a continuous spectrum, Δf is the bandwidth of the receiver used to record the discrete source, and m is the ratio of the space-rocket to discrete-source signal. The emitted power P was calculated from:

$$P = p4\pi R^2$$

where R is the distance from the earth (isotropic source emitting equally in both polarization components).
There are 7 figures and 7 references: 2 Soviet and 5 English.
The four most recent English language references read:

Ref.4: P. Moore, Nature, V.184, 502, 1959.
Ref.5: H.P. Wilkins, Nature, V.184, 502, 1959.
Ref.6: G. Fielder, Nature, V.185, 11, 1960.
Ref.7: G. Whitfield, Paris Symposium on Radio Astronomy, Stanford, California, 1959, p. 299.

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D201/D302

3,1750
64320

AUTHORS: Vitkevich, V.V., Kuz'min, A.D., Matveyenko, L.I., Sorochenko, R.L., and Udal'tsov, V.A.

TITLE: Radioastronomical observations of Soviet- cosmic rockets

PERIODICAL: Radiotekhnika i elektronika, v. 6, no. 9, 1961, 1420 - 1431

TEXT: This is a description of a specially designed radio interferometer with phase modulation, as used in tracking the first three Soviet space rockets. The principle of a two channel phase divergent reception was used to detect changes in the signal amplitude, due to relative changes of the position of transmitter with respect to the lobe of interference diagram. In receiving a signal with continuous spectrum the fluctuation sensitivity in units of temperature (T_a) of the antenna is given by the well known equation

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Radioastronomical observations ...

$$\delta T_a = \alpha_1 T_o F_e \sqrt{\frac{1}{\Delta f \tau}}, \qquad (7)$$

where α_1 - a dimensionless factor depending on the properties of the receiver, T_o - standard ambient temperature; $F_e = (T_{i.} + T_{in})/T_o$ - the equivalent input temperature determined by noise of the receiver; $T_{in} = (F_r - 1)$; F_r - noise factor of the receiver; T_a - antenna temperature; τ - time constant of the output cct; Δf - passband between input and detector. The bloc diagram of the receiver is shown; the operating frequency was 183.6 Mc/s, that of the transmitter in the rocket capsule. The interferometer had two parabolic antennae 8 x 16 and 11 x 28 m, spaced in the E-W direction by approximately 176 m. Total length of both antennae was 8 m. The antennae were reilluminated from their focal points by specially designed radiating systems, assuring best possible illumination for two linear polarizations perpendicular with respect to each other. Yu.P. Ilyasov participated in their design. A schematic of the

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illuminating system is also shown, the three resonant dipoles were connected by equal lengths of a PK-20 (RK-20) cable to a common feeder. The directional patterns and utilization factors of the antenna areas were determined from solar radiation. For both antennae, the area utilization factor was about 0.5. Phase modulation at a frequency 72 c/s was achieved by changing the phase by 180° by means of periodical variation of the electric length of the wall connecting the local oscillator with one of the mixers, so that the received signal was amplitude modulated at this frequency. The phase modulator was designed around a standard hybrid switch. The switching elements were light house diodes type 6Д3Д (6D3D) driven by the sinusoidal modulating voltage. The attenuation introduced did not exceed 2 db. The change in the diode slopes by way of changing the bias and the insertion of the modulator into the local oscillator circuit permitted the parasitic amplitude modulation of earlier systems to be reduced considerably. The modulator used permitted the radio meter with phase modulation to be changed into that with AM, this was achieved by suppressing the modulating voltage at one of the diodes. The signals were preamplified at UHF by amplifiers

Radioastronomical observations ...

placed directly at the antennae. The noise factor of UNF preamplifiers was 5. The amplified signals from each antenna were changed after buffer stages to the 1st IF of 6.95 Mc/s and fed into two channels with a 90° phase shift between them. A double frequency conversion was used. The 190.554 mc/s frequency of the first local oscillator was produced by a thermostatically controlled crystal oscillator working at 9.074 mc/s with subsequent multiplication by 21. Its relative instability was 10^{-6} and hence the passband of a monochromatic signal was chosen to be 2Kc/s. To secure reception with the signal frequency shifting due to the Doppler effect, step tuning within 8 Kc/s was provided formed by 5 resonant circuits detuned in 2 Kc/s steps. On top of the first L.O. could be continuously tuned within ± 3.2 Kc/s. For calibration purposes, when a under-passband is required, the second amplifier pass band could be switched from 2 to 10 Kc/s without affecting tuning and gain. The signal, detected by a synchronous detector, was taken from an RC output filter with time constant τ = 26 sec. This value permits achieving the required fluctuation sensitivity and in practive does not affect the interference amplitude. All power sup-

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Radioastronomical observations ...

plies were stabilized with a stabilization factor of about 10^3. The signals were recorded on electronic automatic recorders type ЭПП-9 (EPP-09) monitored by one minute time markers. The experimental data of the receiver sensitivity are tabulated. The experimental sensitivity was about half that calculated from Eq. (7). The maximum sensitivity of the interferometer, corresponding to the minimum detected power levels, are also tabulated. In making final adjustments (M.V. Gorelova participated in the final adjustment method evaluation) constant and timevarying parameters had to be considered. The constant parameters are γ - angle between the horizontal plane and the projection of the base onto a vertical east-west plane, θ - angle between the east-west direction and projection of the base onto a horizontal plane and D - base of the interferometer distance between the antennae are determined by fixed antenna geometry: $\eta = \varphi_n/\lambda$ on the other hand is determined by electrical lengths of the cables and phase characteristics of input stages and can vary with time. A geodesical survey gave the following results: D = 175.896 m; γ = 2°44'; θ = - 14' so that the expression

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for the azimuth of the source is given by

$$A = 179^{\circ}46' + \arcsin\left[\frac{0.0093006}{\sin z}(n - n) - 0.047669 \operatorname{ctg} z\right], \quad (10)$$

where n - is the number of the lobe and z - the zenith angle of the source. The parameter η was determined from

$$\eta = \frac{t_r - t_{\Lambda\,\text{source}}}{T}, \quad (11)$$

where T - the period of the interference lobe, t_r - the calculated and $t_{\Lambda\,\text{source}}$ - the real instant at which the source passes through the maximum of the interference diagram. Owing to the finite value of the output cct time constant, the instant $t_{\Lambda\,\text{source}}$ at which the source crosses the maximum of the diagram does not correspond with t representing the maximum deflection of the seconding instru-

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Radioastronomical observations ... D201/D302

ment. $\Delta\tau$ thus was introduced, as given by

$$\Delta\tau = t_{\Lambda} - t_{\Lambda\,\text{source}} = \tau\left[1 - \frac{4}{3}\left(\frac{\tau}{T}\right)^2\right] \quad (12)$$

in adjusting the arrangement. The above instrument and method of observations were applied to tracking the first, second and third Soviet- space rockets, launched January 2, September 12, and October 4, 1959, respectively; measuring their angular coordinates and measurements of the intensity of the received signal were also carried out. There are 8 figures, 3 tables and 11 references: 5 Soviet-bloc and 6 non-Soviet-bloc. The references to the 4 most recent English-language publications read as follows: G. Fielder. Nature, 1960, 185, 4705, 11; H.P. Wilkins, Nature, 1959, 184, 4685, 502; P. Moore, Nature, 1959, 184, 4085, 502; J.G. Davies, A.G.B. Lovell, Nature, 1959, 194, 4685, 501.

ASSOCIATION: Fizicheskiy institut im. P.N. Lebedeva AN SSSR (Institute of Physics im. P.N. Lebedev. AS USSR)
SUBMITTED: October 4, 1960
Card 7/7

SOROCHENKO, R.L.

Radio astronomical research and instruments. Vest. AN SSSR 31 no.11:88-93 N '61. (MIRA 14:11)
(Radio astronomy--Congresses)

SOKOLENKO, K.L.

Preliminary results of observations on the wave $\lambda = 21$ cm. of a Milky Way region with the center $\alpha = 20^h18^m$, $\delta = 42°30'$. Astron.zhur. 38 no.3:478-482 My-Je '61. (MIRA 14:6)

1. Fizicheskiy institut imeni P.N.Lebedeva AN SSSR.
(Milky Way)

S/504/62/017/000/004/007
I046/I246

AUTHORS: Sorochenko, R.L. and Ariskin, V.I.

TITLE: Space distribution of neutral hydrogen in Cygnus

SOURCE: Akademiya nauk SSSR. Fizicheskiy institut. Trudy, v. 17. Moscow, 1962. Radioastronomiya, 115-127

TEXT: The work refers to the 21 cm radiomeasurements in the area defined by $20^h04^m \leqslant \alpha \leqslant 20^h44^m$ and $38^\circ < \delta \leqslant 46^\circ$ (Ref. 1: Sorochenko, R.L. Astronomicheskiy zhurnal, 1961, 38, No.3). Allowing for the spreading of the hydrogen radiolines by the method of Ollongren and van de Hulst (Ref. 2: B. A. N., 1957, N 13, 196), the authors show that there are two hydrogen-deficient regions in Cygnus; the one in $l = 45$ to 47° at 3 kps from the Sun, and the other in $l = 47^\circ.6$ to $49^\circ.2$ at 1.5 kps from the Sun. A definite correlation is established between the isophots of the radiosource Cygnus-X and the HI deficiency isolines, this being in agreement with previous reports on the association of Cygnus-X with HII (thermal radiation). There are 7 figures.

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SOROCHENKO, R.L.

Location of certain regions of ionized hydrogen within the galactic longitudes l = 43 - 67. Trudy Fiz. inst. 17:128-136 '62. (MIRA 15:12)

(Gases, Interstellar)

MATVEYENKO, L. I.; SOROCHENKO, R. L.

Observations of the total solar eclipse of February 15, 1961 at wavelengths of 22 and 83 cm. Izv. vys. ucheb. zav.; radiofiz. 5 no.5:873-881 '62. (MIRA 15:10)

1. Fizicheskiy institut imeni P. N. Lebedeva AN SSSR.

(Eclipses, Solar—1961)

SOROCHENKO, R.

Increase in the distance of television signal reception.
Radio no.10:35 O '63. (MIRA 16:11)

BORODZICH, E.V.; SOROCHENKO, R.L.

Use of low-noise amplifiers in spectral radiometers. Izv.vys. ucheb.zav.; radiofiz. 6 no.6:1167-1172 '63. (MIRA 17:4)

1. Fizicheskiy institut imeni Lebedeva AN SSSR.

ACCESSION NR: AP4041031 S/0120/64/000/003/0121/0122

AUTHOR: Rusinov, Yu. S.; Sorochenko, R. L.

TITLE: Primary standard of noise radiation in the decimetric range

SOURCE: Pribory* i tekhnika eksperimenta, no. 3, 1964, 121-122

TOPIC TAGS: noise radiation standard, primary radiation standard, decimeter wave range, noise temperature, noise temperature measurement, matched coaxial load

ABSTRACT: A description is given of a primary noise standard which can be used in the decimeter wave range for direct noise-temperature measurements of the receiver, as well as for the calibration of noise diodes, gas discharge tubes, and other secondary noise standards. The basic component of this standard is a well-matched coaxial load equipped with systems for uniform heating and temperature control. The absorbing (and accordingly, the radiating) element consists of a standard carbon 75-ohm UNU-10-type resistance. The structure of this element is made in such a way that its rf resistance may be considered as equal to its dc resistance. A wide-range matching

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can be achieved if the matched load is made in the form of an exponential cone with the absorbing resistor placed inside of it. The resistor has three heating spirals which maintain a desired uniform temperature (200 to 250C). The process of establishing a uniform temperature of the heated load lasts from 1,5 to 7 hr, and during this period the amplification of the receiving channel may change. It is therefore expedient to use two loads; one is heated to the necessary temperature, and the other, entirely equivalent in structure to the first, remains cool. During the measurements both loads are alternately connected to the receiver input, which makes it possible to make measurements in a short period of time. The device has been used to measure noise temperatures of a radio-astronomical receiver operating on the 20-cm wavelength and to calibrate a diode-equipped noise generator. Accuracy of measurements was 3 to 4%. Orig. art. has: 1 figure.

ASSOCIATION: Fizicheskiy institut AN SSSR (Institute of Physics, AN SSSR)

ACCESSION NR: AP4041031

SUBMITTED: 05Jul63	ATD PRESS: 3052	ENCL: 00
SUB CODE: EC	NO REF SOV: 000	OTHER: 000

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S/0020/64/156/006/1326/1328

ACCESSION NR: AP4041397

AUTHOR: Martirosyan, R. M.; Prokhorov, A. M. (Corresponding member AN SSSR); Sorochenko, R. L.

TITLE: Application of a quantum paramagnetic amplifier in radioastronomy

SOURCE: AN SSSR. Doklady*, v. 156, no. 6, 1964, 1326-1328

TOPIC TAGS: quantum paramagnetic amplifier, radioastronomy, hydrogen line, radio wave fine structure

ABSTRACT: The quantum paramagnetic amplifier (QPA) (see T. V. Jelley, Microwave J. #2 (1962)) consists of two coupled resonance circuits of the signal frequency. It can be used in spectral radioastronomical studies which do not require a broad transmission band. The authors used this amplifier in connection with the 22-meter radio telescope of FIAN for observation of the 21-cm radiation of neutral hydrogen. The active substance is $Al_2O_3:Cr^{3}$ in a perpendicular orientation of the trigonal axis with respect to the external magnetic field of 2000 Oe. The general noise temperature of the system is expressed as a function of the noise temperature of the components. The results indicate that QPA permits obtaining detailed information on the radiation profile (fine structure). Orig. art. has: 3 figures.

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L 4420-66 FBD/EWT(1)/EWA(h) GW/WS-2

ACCESSION NR: AP5022793 UR/0141/65/008/004/0699/0703
539.28.078:523.164

63
61
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AUTHOR: Martirosyan, R. M.; Prokhorov, A. M.; Sorochenko, R. L.
55 55

TITLE: Radio spectrometer for 21-cm wavelength with paramagnetic amplifier
55 25

SOURCE: IVUZ. Radiofizika, v. 8, no. 4, 1965, 699-703

TOPIC TAGS: radio spectroscope, radio astronomy, quantum device, amplifier stage, paramagnetic ion, hydrogen line, maser 12,55

ABSTRACT: The authors describe a spectrometer 12,55 intended for the investigation of the hydrogen radio lines, using a paramagnetic amplifier with two coupled 1420-Mc quarter-wave strip resonators. Ruby with 0.04% Cr^{3+} concentration was used as the active medium. An external field of 2000 oe was produced by a superconducting solenoid with winding of pure niobium. The gain of the amplifier when working with a radiometer was 16—18 db at a bandwidth of 7—8 Mc. The gain drift after 30 minutes of operation did not exceed 2—3%. A block diagram of the radiospectrometer is shown in Fig. 1 of the Enclosure. Modulation was by switching the input of the paramagnetic amplifier from the antenna to a dummy resistor equal to

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L 4420-66
ACCESSION NR: AP5022793

the wave resistance of the coaxial line. The amplifier was switched to the radiometer circuit with the aid of a circulator with 0.2 and 20 db loss in the forward and backward directions, backed up by a ferrite gate for better decoupling. The stabilization and calibration of the equipment is briefly described. Tests have demonstrated the ability of the apparatus to disclose fine details in the radio line profile. Orig. art. has: 3 figures. [02]

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva AN SSSR (Physics Institute, AN SSSR) 55

SUBMITTED: 30Jul64 ENCL: 01 SUB CODE: NP, AA

NO REF SOV: 005 OTHER: 003 ATD PRESS: 4125

Card 2/3

L 4420-66
ACCESSION NR: AP5022793

ENCLOSURE: 01

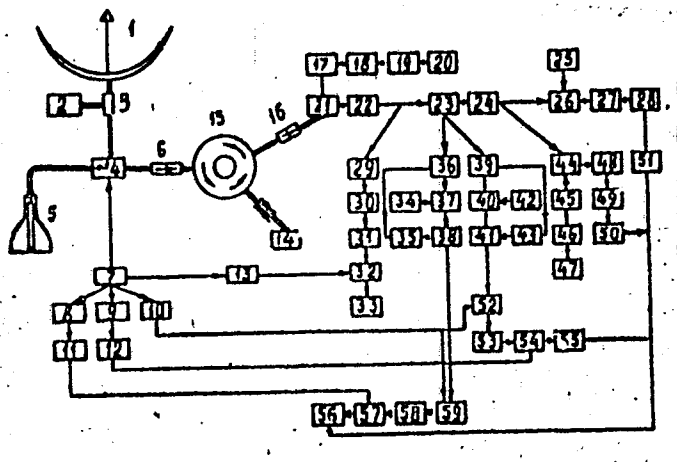

Fig. 1. Radiospectrometer block diagram

1 - Antenna; 2 - noise gen.; 3 - directional coupler; 4 - modulator; 5 - Dewar with dummy load; 6,16 - ferrite gates; 7 - modulation freq. gen.; 8.,9,13 - phase shifters; 10,11, 12 - pulse shapers; 14 - quant. paramag. ampl.; 15 - circulator; 17 - freq. quadrupler; 18 - 108x freq. multiplier; 19 - buffer; 20 - first heterodyne gen.; 21 - first mixer; 22 - if ampl.; 23 - second mixer; 24 - contin. tuning heterod.; 25 - 1000 kcs timer gen.; 26 - mixer; 27 - 250-kcs ampl.; 28 - detector; 29, 30 - suppl. ampl. and broadband output detector; 31, 32, 33 - modul. freq. ampl, synch. detector, and broadb. output recorder; 24, 42 - 3d heterod. of narrow band outputs; 36,39 - 2d if amplif.; 35, 43 - agc; 37, 40 - 3d mixers; 30, 41 - quartz filters; 44 - 10 kcs timing pulse mixer; 45 - harmonics group ampl.; 46 - narrow pulse shaper; 47 - 20 kcs gen.; 48 - 5 kcs ampl.; 49 - detector; 51 - timing relay; 52,59 - narrow band chann. detect.; 53,58 - modul. freq. ampl.; 54, 47 - synch. det.; 55, 56 - narrow band channel recorders.

Card 3/3

L 27223-65 EWG(j)/EWA(k)/FBD/EWT(1)/EEC(k)-2/EEC(t)/T/EEC(b)-2/EWP(k)/EWA(h)/EWA(m)-2
Pn-4/Pe-4/Pr-4/Peb/Pi-4/Pl-4 IJP(c) WG
ACCESSION NR: AP5002897 S/0109/65/010/001/0040/0044

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43
B

AUTHOR: Karlov, N. V.; Martirosyan, R. M.; Sorochenko, R. L.

TITLE: Effect of mismatch of antenna-feeder lines upon the frequency response of resonator-type quantum paramagnetic amplifiers 25

SOURCE: Radiotekhnika i elektronika, v. 10, no. 1, 1965, 40-44

TOPIC TAGS: amplifier, quantum paramagnetic amplifier, maser amplifier

ABSTRACT: A theoretical and experimental investigation of the effect of mismatch of input (radio-reception) antenna-feeder channels upon the frequency response of quantum paramagnetic amplifiers (QPA) is reported. Formulas for the gain depending on the degree of mismatch for single- and two-circuit QPA's are developed; curves illustrating the effect of mismatch (various types of deformations) are plotted. A QPA with two active resonators was alternatively connected to differently matched loads; their voltage-standing-wave ratios were

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L 27223-65

ACCESSION NR: AP5002897

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1.1 and 1.7. Oscillograms show experimental frequency response curves for various gains and decouplings. At a 20-db gain and a 35-db decoupling, the difference between 1.1 and 1.7 in voltage SWR becomes negligible. Orig. art. has: 6 figures and 9 formulas.

ASSOCIATION: none

SUBMITTED: 19Oct63 ENCL: 00 SUB CODE: EC

NO REF SOV: 003 OTHER: 000

Card 2/2

L 52364-65 FBD/EWT(1)/EWG(v)/EEC-4/EEC(t) Pe-5/Pae-2/Pi-4 GW/WS-4

ACCESSION NR: AT5012806 UR/2504/65/028/000/0090/0099

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B+1

AUTHOR: Sorochenko, R. L.

TITLE: 7. Spectral lines of excited hydrogen in the radiofrequency band and the chances for their experimental observation

SOURCE: AN SSSR. Fizicheskiy institut. Trudy, v. 28, 1965. Radioteleskopy (Radio telescopes), 90-99

TOPIC TAGS: hydrogen radiofrequency line, radiofrequency line brightness, radiofrequency line shape, nebula hydrogen radiofrequency line, excited hydrogen line, radioastronomy

ABSTRACT: The principal lines of the sixth and seventh long-wave series of hydrogen have been observed only comparatively recently (C. Hamphreys, J. Res. Bur. Stand., 1953, 50, 1); I. Wild has discussed the possibilities for excited hydrogen line production in the radiofrequency range (Astrophys. J., 1952, 115, 206). The present paper contains calculations of the emission intensity and shape of the spectral lines of the H II region incorporating the recently developed theory of excited atom interaction with the electric fields due to electrons and ions. It covers the brightness temperature of the lines, their width and shape, the dependence of the spectral line width on the wavelength and electron density, and

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L 52364-65 2

ACCESSION NR: AT5012806

the relative increase in brightness of the H II lines as a function of the wavelength and electron density, and discusses the chances for the observation of such lines from various nebulae. "The author is very much indebted to I. I. Sobel'man for valuable advice and remarks during the course of the investigation." Orig. art. has: 31 formulas and 4 figures.

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva Akademii nauk SSSR (Physics Institute of the Academy of Sciences, SSSR)

SUBMITTED: 00 ENCL: 00 SUB CODE: AA

NO REF SOV: 006 OTHER: 005

Card 2/2

L 52041-65 FBD/EWT(l)/EWG(v)/EEC-4/EEC(t)/FCS(k) Pe-5/Pae-2/Pi-4/Pj-4/
Pl-4 WS-4/GW/WR
ACCESSION NR: AT5012810 UR/2504/65/028/000/0129/0134

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B+1

AUTHOR: Kokurin, Yu. L.; Sorochenko, R. L.

TITLE: 11. Radiotelescopes with spherical reflectors

SOURCE: AN SSSR. Fizicheskiy institut. Trudy, v. 28, 1965. Radioteleskopy (Radio telescopes), 129-134

TOPIC TAGS: radiotelescope reflector, spherical reflector, radiotelescope reemitter, radiotelescope field

ABSTRACT: The construction of large-scale, movable, radiotelescope antennas meets with severe technological difficulties. Consequently, it seemed promising to study radiotelescope systems consisting of a static spherical reflector and a small specially shaped reemitter placed within the focal region of the mirror (A. K. Head, Nature, 1957, 179, no. 4562). In this paper, submitted in November, 1960 to the enlarged plenary meeting of the Komissiya po radioastronomii (Commission on Radioastronomy), the authors investigate theoretically the shape of the reemitting surface of the spherical radiotelescope and its field of view and compare its properties with known alternative solutions. A spherical reflector could cover approximately 80% of the sources which can be observed by movable instruments, and the observation time is cut in half; the construction of the

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L 52041-65
ACCESSION NR: AT5012810

spherical reflector is quite simple, they are easy to run, and since they are located below the earth's surface the secondary reflector almost completely screens the irradiator from the possible perturbing sources. The spherical radiotelescope should also have a very low antenna temperature noise. Orig. art. has: 12 formulas, 3 figures, and 1 table.

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva Akademii nauk SSSR (Physics Institute of the Academy of Sciences, SSSR)

SUBMITTED: 00 ENCL: 00 SUB CODE: AA

NO REF SOV: 001 OTHER: 001

Card 2/2

L 45748-65 EEC-4/EWG(v)/EWT(1)/EEC(t)/T/AD Pe-5/P1-4/Po-4/Pae-2 GW/
WS-4

ACCESSION NR: AP5010431 UR/0033/65/042/002/0316/0322

56
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AUTHOR: Matveyenko, L.I.; Martirosyan, R.M.; Sorochenko, R.L.

TITLE: Observations of the occultation of the Crab nebula on 16 April 1964

SOURCE: Astronomicheskiy zhurnal, v. 42, no. 2, 1965, 316-322

TOPIC TAGS: Crab nebula, nebula occultation, moon, radio astronomy, lunar radio emission

ABSTRACT: The apparatus and method used for observations of an occultation of the Crab nebula by the moon are described. The observations were made at 3.3, 10 and 21 cm on 16 April 1964 at the radioastronomical station of the Physics Institute, AN SSSR using a telescope with a 22-m parabolic dish. At 3.3 cm the width of the directional pattern at the 3-db level was close to the dimensions of the Crab nebula. Amplitude-modulation radiometers were used. Records of the occultation between the first and second contacts are shown in Fig. 1 of the Enclosure. The occultation curves are greatly distorted due to a change in the contribution of lunar radio emission at 3.3 cm. Fig. 2 of the Enclosure shows occultation curves corrected for the influence of lunar radio emission. The curves for observations at 10 and 21 cm reveal that the curves are smooth and close to one another, with deviations not exceeding 1±2%

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L 45743-65
ACCESSION NR: AP5010431

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of the total flux of radio emission. This means that for these waves there are no regions with a surface brightness equal to double the brightness at the center of the nebula and measuring 0'.25 x 0'.25 and 0'.35 x 0'.35, respectively. The entry and emergence occultation curves are asymmetrical, indicating an absence of radial symmetry. The nonuniformity of the curves, especially in the region of the second and third contacts, indicates a nonuniform distribution of brightness temperature. The times of the four contacts, determined at the 23-db level, virtually coincide at 10 and 21 cm. The corresponding angular dimensions of the nebula for the 25-db level can be estimated from Fig. 3 of the Enclosure. "The authors express deep appreciation to N.A. Mitreykin, V.I. Pushkarev, N.A. Abrosimova, N.F. Il'in, A.I. Kozlov and S.K. Palamarchuk for great assistance in preparing the apparatus and carrying out the observations". Orig. art. has: 5 formulas, 4 figures and 4 tables. [08]

ASSOCIATION: Fizicheskiy institut Akademii nauk SSSR imeni P.N. Lebedeva (Physics Institute of the Academy of Sciences, SSSR)

SUBMITTED: 03Sep64 ENCL: 03 SUB CODE: AA

NO REF SOV: 010 OTHER: 004 ATD PRESS: 4001

Card 2/5

SOROCHENKO, R.L.; BORODZICH, E.V.

Detection of the radio emission line of excited hydrogen in the NGC 6618 (Omega) nebula. Dokl. AN SSSR 163 no.3:603-605 Jl '65. (MIRA 18:7)

1. Fizicheskiy institut im. P.N.Lebedeva AN SSSR. Submitted January 5, 1965.

L 4176-66 EWT(m)/EPF(c)/T Pl

ACC NR: AP5024389 SOURCE CODE: UR/0286/65/000/015/0068/0068

INVENTOR: Skripchenko, Ye. S.; Naumenko, P. V.; Podol'skaya, N. Z.; Orlova, K. I.; Balagin, I. S.; Sventokhovskaya, V. K.; Dyushev, I. P.; Sorochenko, S. I.; Klimkovich, V. V.; Chamir, T. S.; Kabantsev, N. A.; Tarlinskiy, D. I.; Zaytsev, V. V.; Tokar', I. K.; Znamenskaya, G. A.; Koritskiy, G. K.

ORG: none

TITLE: Method of obtaining liquid lubricant-coolant for rolling thin steel strips. Class 23, No. 173369

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 15, 1965, 68

TOPIC TAGS: lubricant, coolant, liquid lubricant, rolling lubricant, cold rolling, strip rolling

ABSTRACT: This Author Certificate introduces a method for the preparation of a liquid coolant-lubricant based on methylenebisamide of synthetic fatty acid used, for instance, in rolling thin transformer or stainless-steel strips. To obtain a stable lubricant which would make it possible to roll the strips to a required thickness, an alkylsulfonate, alkylarylsulfonate, or hydroxyethyl amine of fatty acid containing five Hydroxy radicals is added to the methylenebisamide of synthetic fatty acid. In a variant, the specified components are melted and then emulsified in water. [AZ]

SUB CODE: FP,MM,IE/SUBM DATE: 21Jun61/ ORIG REF: 000/ OTH REF: 000/ ATD PRESS: 4128

UDC: 621.892:621.7.016.3

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L 8471-65 Pa-4 AMD/APGC(c)

ACCESSION NR: AP4039588 S/0016/64/000/006/0074/0076

AUTHOR: Sorochenko, Ya. I.; Shcherbak, Yu. F. B

TITLE: Allergic indices of intracutaneous injection of therapeutic brucellosis vaccine combined with hyaluronidase (preliminary report)

SOURCE: Zhurnal mikrobiologii, epidemiologii i immunobiologii, no. 6, 1964, 74-76

TOPIC TAGS: brucellosis, undulant fever, brucellosis diagnosis, brucellosis vaccine with lidase, intracutaneous injection, allergic reaction, hyperemia

ABSTRACT: Allergic reactions to intracutaneous injections of therapeutic brucellosis vaccine with a hyaluronidase preparation were investigated in brucellosis patients, pateints with polyarthritis of a nonbrucellosis etiology, and healthy persons for possible use in brucellosis diagnosis. A 0.2 ml mixture of therapeutic brucellosis vaccine (25 million bacteria) with lidase (8 units) added to intensify allergic reactions was injected into each hip at two symmetrical points in equal amounts. Three to five minutes after injection, a

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nonspecific reaction characterized by a papule and a hyperemic ring 5 to 6 cm appeared at the injection site in all subjects and disappeared 1 to 1½ hours later. No further reactions were found in healthy persons or in patients with polyarthritis of a nonbrucellosis etiology. However, in brucellosis patients hyperemia appears at the injection site 12 to 24 hrs later and gradually disappears after the second day. Also, other reactions were often observed including intensified pain in joints, higher temperature, and depression. In additional experiments on patients with chronic brucellosis, intracutaneous injection of brucellosis vaccine and lidase produced skin reactions in many patients with negative Byurn tests and increased serological reaction titers in all cases. Intensification of allergic reactions with addition of lidase to the brucellosis vaccine was confirmed by experimental data. The use of intracutaneous injections of brucellosis vaccine with lidase for brucellosis diagnosis appears feasible since allergic reactions are found only in brucellosis patients. Orig. art. has: None.

L 8471-65

ACCESSION NR: AP4039588

ASSOCIATION: Tsentral'nyy institut usovershenstvovaniya vrachey, Moscow (Central Institute for Advancement of Physicians)

SUBMITTED: 18Jul63 ENCL: 00 SUB CODE: LS

NR REF SOV: 004 OTHER: 001

Card 3/3

[redacted], [redacted]

Determination of capillary permeability by the method of radioactive indicators. Trudy TSIU 71:206-211 '64.
(MIRA 18:6)

1. Kafedra infektsionnykh bolezney (zav. deystvitel'nyy chlen AMN SSSR prof. G.P. Rudnev) i kafedra meditsinskoy radiologii [illegible] prof. V.K. Modestov) Tsentral'nogo instituta usovershenstvovaniya vrachey.

SOROCHENKO, Ya.I.

Determination of hyaluronidase activity in the blood serum by means of the McClean method. Vop. med. khim. 10 no.6: 615-619 N-D '64. (MIRA 19:1)

1. Kafedra infektsionnykh bolezney TSentral'nogo instituta usovershenstvovaniya vrachey, Moskva.

SOROCHENKO, Ye.V.

Action of phytonicides of Alnus incana, of Juniperus, and of Iceland moss on Protozoa. Antibiotiki 1 no.3:50-53 My-Je '56. (MIRA 9:10)

1. Kafedra biologii (zav. prof. F.N.Bassin) Arkhangel'skogo gosudarstvennogo meditsinskogo instituta.

(PLANTS,
Alnus incana, Juniperus & Iceland moss phytonicides, eff. on Protozoa (Rus))
(PROTOZOA, effect of drugs on,
Alnus incana, Juniperus & Iceland moss phytoncides (Rus))

SOROCHENKO, Ye.V.

Distribution of echinococcosis in the Nenets National Area. Med.paraz. i paraz.bol. 33 no.3:287-289 My-Je '64. (MIRA 18:2)

1. Kafedra obshchey biologii Arkhangel'skogo meditsinskogo instituta.

SOROCHENKO, Ye.V.

Helminthiases and intestinal protozoa in the population of Nenets National Area. Med. paraz. i paraz. bol. 34 no.2:151-153 Mr-Ap '65. (MIRA 18:11)

1. Kafedra obshchey biologii Arkhangel'skogo gosudarstvennogo meditsinskogo instituta.

SOROCHENKOV, A. F.

SOROCHENKOV, A. F.: "Investigation of the conditions for obtaining rich and stable yields of buckwheat in the Polesye and the forest steppe of the Ukrainian SSR." Min Higher Education UkSSR. Ukrainian Order of Labor Red Banner Agricultural Academy. Kiev, 1956 (Dissertation for the Degree of Candidate in Agricultural Sciences)

So: Knizhnaya letopis', No 17, 1956

MOMOT, Ya. G.; SOROCHENKOV, A.F.; LITOVCHENKO, M.K.; SAFAROV, T.S.; BEGLYAROVA, L.S.

"Plant breeding" by N. A. Maisurian. Reviewed by IA. G. Momot and others. Zemledelie 23 no.6:94-95 Je '61. (MIRA 14:6)

1. Kafedra rasteniyevodstva Samarkandskogo sel'skokhozyaystvennogo instituta.

(Field crops)
(Maisurian, N.A.)

SOROCHENKOV, A.F., kand. sel'skokhoz. nauk

The "Petrovskii" State Farm. Zemledelie 26 no.8:95-96 Ag '64.
(MIRA 17:11)

1. Lipetskaya gosudarstvennaya opytnaya stantsiya.

KOLOTOVA, N.N., prof.; SOROCHINSKAYA, A.I.

Rheumatic vasculitis with chiefly cutaneous localization.
Vest.derm.i ven. no.8:45-50 '62. (MIRA 15:9)

1. Iz kafedry gospital'noy terapii Vinnitskogo meditsinskogo instituta (zav. - prof. N.N. Kolotova; dir. - dotsent S.I. Korkhov).
(RHEUMATIC FEVER) (SKIN--DISEASES)
(BLOOD VESSELS--DISEASES)

ROYTBERD, L.S.; SOROCHINSKAYA, A.I.

Observations of the diuretic and hypotensive activity of hypothiazide. Vrach. delo no.4:127-128 Ap'63. (MIRA 16:7)

1. Kafedra gospital'noy terapii (zav.Prof. N.N.Kolotova) Vinnitskogo meditsinskogo instituta i terapevticheskoye otdeleniye (zav. A.I.Sorochinskaya) pervoy gorodskoy bol'nitsy.
(THIADIAZINE) (ANTIHYPERTENSIVE AGENTS)
(DIURETICS AND DIURESIS)

STOGNIY, I.I.; BOVSUNOVSKIY, A.I.; SHAPOVALOV, P.T., nauchnyy sotrudnik; KUDARENKO, F.F., nauchnyy sotrudnik; ZELINSKIY, A.A, nauchnyy sotrudnik; SOROCHINSKAYA, N.F., nauchnyy sotrudnik

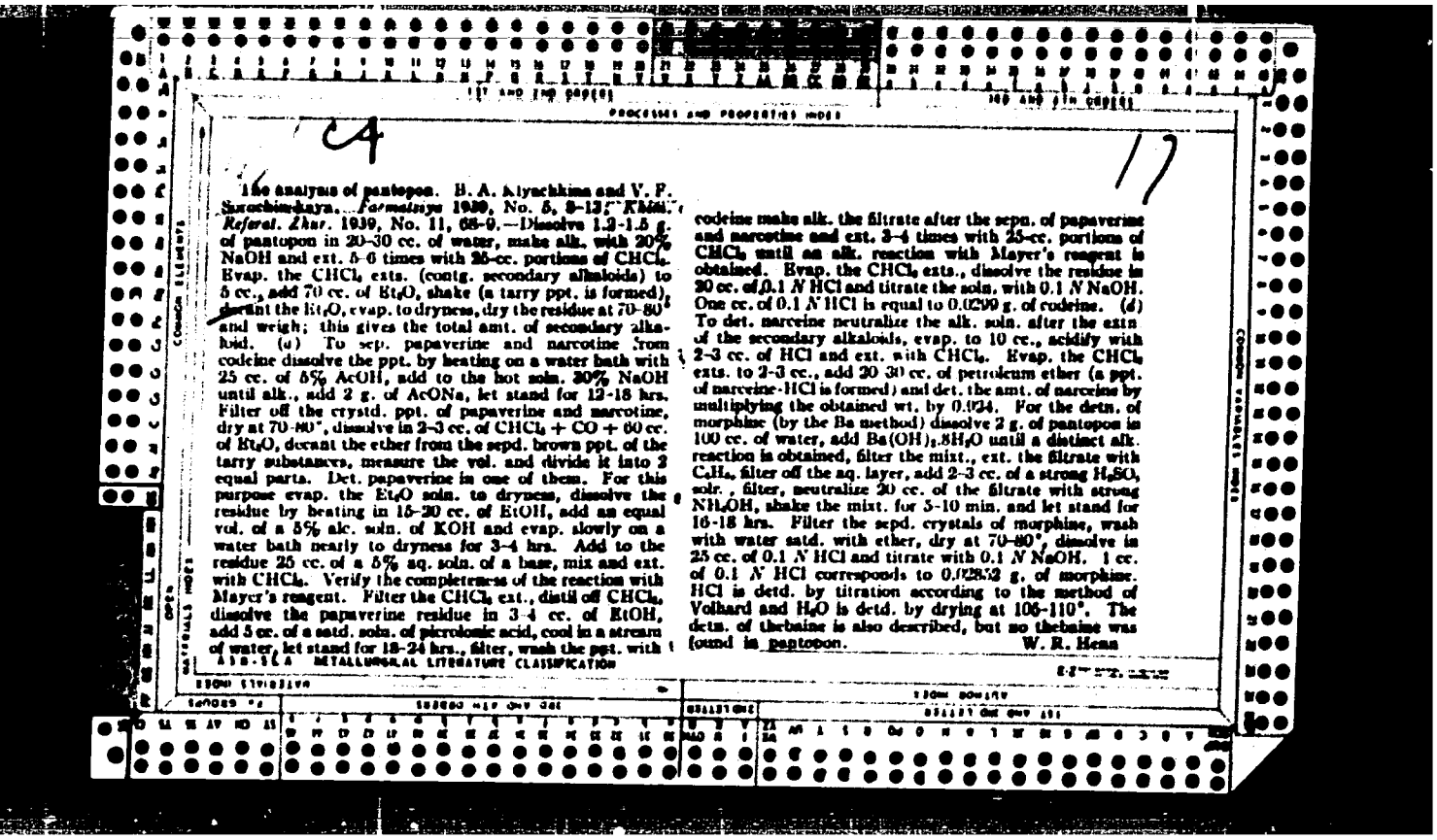
Farm management system on sugar beet growing collective farms. Zemledelie 7 no.12:21-29 D '59. (MIRA 13:3)

1. Predsedatel' kolkhoza imeni Lenina Zhashkovskogo rayona (for Stogniy). 2. Inspektsiya po sel'skomu khozyaystvu Zhashkovskogo rayona (for Bovsunovskiy). 3. Vsesoyuznyy nauchno-issledovatel'skiy institut sakharnoy svekly (for Shapovalov, Kudarenko Zelinskiy, Sorochinskaya).
(Sugar beets) (Collective farms)

SOROCHINSKAYA, V.

Sorochinskaya, V. "Miocene deposits of the former Korov'ya, in the Tsymlyanskiy reservoir region," Sbornik nauch. rabot studentov (Rost. n/D gos. un-t im. Molotova), Issue 1, 1949, p. 128-32 --- Bibliog: 9 items

SO: U-3566, 15,March, 53 (Letopis 'Zhurnal 'nykh Statey, No. 14, 1949).



C4

17

The analysis of pantopon. B. A. Klyachkina and V. F. Savchinskaya. *Farmatsiya* 1939, No. 5, 8-12; *Khim. Referat. Zhur.* 1939, No. 11, 68-9.—Dissolve 1.2-1.5 g. of pantopon in 20-30 cc. of water, make alk. with 20% NaOH and ext. 5-6 times with 25-cc. portions of $CHCl_3$. Evap. the $CHCl_3$ exts. (contg. secondary alkaloids) to 5 cc., add 70 cc. of Et_2O, shake (a tarry ppt. is formed), decant the Et_2O, evap. to dryness, dry the residue at 70-80° and weigh; this gives the total amt. of secondary alkaloid. (*a*) To sep. papaverine and narcotine from codeine dissolve the ppt. by heating on a water bath with 25 cc. of 5% AcOH, add to the hot soln. 30% NaOH until alk., add 2 g. of AcONa, let stand for 12-18 hrs. Filter off the crystd. ppt. of papaverine and narcotine, dry at 70-80°, dissolve in 2-3 cc. of $CHCl_3$ + CO + 60 cc. of Et_2O, decant the ether from the sepd. brown ppt. of the tarry substances, measure the vol. and divide it into 2 equal parts. Det. papaverine in one of them. For this purpose evap. the Et_2O soln. to dryness, dissolve the residue by heating in 15-20 cc. of EtOH, add an equal vol. of a 5% alc. soln. of KOH and evap. slowly on a water bath nearly to dryness for 3-4 hrs. Add to the residue 25 cc. of a 5% aq. soln. of a base, mix and ext. with $CHCl_3$. Verify the completeness of the reaction with Mayer's reagent. Filter the $CHCl_3$ ext., distil off $CHCl_3$, dissolve the papaverine residue in 3-4 cc. of EtOH, add 5 cc. of a satd. soln. of picrolonic acid, cool in a stream of water, let stand for 18-24 hrs., filter, wash the ppt. with codeine make alk. the filtrate after the sepn. of papaverine and narcotine and ext. 3-4 times with 25-cc. portions of $CHCl_3$ until an alk. reaction with Mayer's reagent is obtained. Evap. the $CHCl_3$ exts., dissolve the residue in 20 cc. of 0.1 *N* HCl and titrate the soln. with 0.1 *N* NaOH. One cc. of 0.1 *N* HCl is equal to 0.0299 g. of codeine. (*d*) To det. narceine neutralize the alk. soln. after the extn of the secondary alkaloids, evap. to 10 cc., acidify with 2-3 cc. of HCl and ext. with $CHCl_3$. Evap. the $CHCl_3$ exts. to 2-3 cc., add 20-30 cc. of petroleum ether (a ppt. of narceine-HCl is formed) and det. the amt. of narceine by multiplying the obtained wt. by 0.934. For the detn. of morphine (by the Ba method) dissolve 2 g. of pantopon in 100 cc. of water, add $Ba(OH)_2.8H_2O$ until a distinct alk. reaction is obtained, filter the mixt., ext. the filtrate with C_6H_6, filter off the aq. layer, add 2-3 cc. of a strong H_2SO_4 solr., filter, neutralize 20 cc. of the filtrate with strong NH_4OH, shake the mixt. for 5-10 min. and let stand for 16-18 hrs. Filter the sepd. crystals of morphine, wash with water satd. with ether, dry at 70-80°, dissolve in 25 cc. of 0.1 *N* HCl and titrate with 0.1 *N* NaOH. 1 cc. of 0.1 *N* HCl corresponds to 0.02852 g. of morphine. HCl is detd. by titration according to the method of Volhard and H_2O is detd. by drying at 105-110°. The detn. of thebaine is also described, but no thebaine was found in pantopon.

W. R. Hess

TUNIS, Ya.; SOROCHINSKAYA, V.F.

Some data on the chemicopharmaceutical industry of Czechoslovakia.
Med. prom. 11 no.3:61-62 Mr '57 (MLRA 10:4)
(CZECHOSLOVAKIA--CHEMISTRY, MEDICAL AND PHARMACEUTICAL)

SORCHINSKAYA, V.F.

Chemical and pharmaceutical industry in the main capitalist countries. Med.prom. 11 no.9:59-61 S '57. (MIRA 10:12)
(CHEMISTRY, MEDICAL AND PHARMACEUTICAL)

SOROCHINSKAYA, V.P.

The drug industry abroad. Med.prom. 12 no.7:59-61 Jl '58 (MIRA 11:8)
(GREAT BRITAIN--DRUG INDUSTRY)

AUTHORS: Shamray, I. A., Sorochinskaya, V. I. SOV/20-120-4-52/67

TITLE: The Mineralogy and the Conditions of Formation of the Dark-Green Iron Ores of Kerch' (Mineralogiya i usloviya formirovaniya kerchenskikh zheleznykh temnozelenykh rud)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol. 120, Nr 4, pp.875-878 (USSR)

ABSTRACT: Among the iron ores of the Kerch'(Kerchenskiy)peninsula the dark-green ferrous oxide-oxide variety is most advanced in development. The two other types: the brown one and the "caviare" ore occur less frequently, and, exactly speaking, are a hypogenic modification of the first. The ferrous oxide-oxide ores have been little investigated, as usually they are covered by a considerable layer of sediments. Only recently new ore of this sort was extracted in the Kamysh-Burunskaya depression. In its fresh state the ore is dark, almost black. It rapidly oxidizes when exposed to air, turning green, then greenish-brown, and finally brown. These ores contain two basic structural and mineralogical components: Iron oxide mineral aggregates (oolite, pea ore and lumps of unknown composition) and a green ferrous oxide cement mass. The structure

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The Mineralogy and the Conditions of Formation of the Dark-Green Iron Ores of Kerch'

of these ores is of a typical oolitic nature. The substance of these formations consists primarily of iron hydroxide minerals: hydrogoethite, goethite, more rarely lepidocrotite. At the same time these iron-oxide agglomerations contain quantities of opal, loamy material and frequently fine terrigenous quartz. In a few layers the oolites are replaced by chamoisite at the surface, forming a narrow seam. On first inspection, the chemical composition of this mineral does not agree with that of the cementing mass (Table 1). The cement essentially is a solid colloidal pseudosolution of chamoisite, mostly as a pebble-like colloid mass. The problem of a common generation of the oxide- and the ferrous oxide minerals in the green ores represents considerable difficulties. The amount of organic substance present in the ore was not sufficient to transform the entire huge masses of iron oxide material into a ferrous oxide state. It only sufficed to ensure the reduction of easily reducible iron oxide under the formation of chamoisite, that is to say of the colloid masses of iron oxide, which penetrated the fine pebble - quartz-like ore substrate. As regards the stage of formation of the ore deposits it can be maintained, that in particular

The Mineralogy and the Conditions of Formation of the Dark-Green Iron Ores of Kerch'

their high concentration is due to the activity of the surf. There are 2 figures, 1 table, and 12 references, 11 of which are Soviet.

ASSOCIATION: Rostovskiy-na-Donu gosudarstvennyy universitet (Rostov-na-Donu State University)

PRESENTED: January 17, 1958, by N. M. Strakhov, Member, Academy of Sciences, USSR

SUBMITTED: January 15, 1958

1. Iron ores---Geology 2. Iron ores--Properties 3. Iron ores --Structural analysis 4. Iron ores--Materials

Card 3/3

SOROCHINSKIY, A.F., kandidat meditsinskikh nauk (Stavropol'); KVITASH, V.A. (Stavropol'); IGORTSEV, S.D. (Stavropol').

Discontinuous sleep and local therapy of certain skin diseases. Vest. ven. i derm. no.3:51 My-Je '54.
(SKIN--DISEASES) (SLEEP--THERAPEUTIC USE)

SOROCHINSKIY, A.F., podpolkovnik med.sluzhby, kand.med.nauk

Use of sleep in some skin diseases. Voen.-med.zhur. no.12:81 D'55
(MIRA 12:1)

(SKIN--DISEASES)
(SLEEP--THERAPEUTIC USE)

GAL'PERIN, Abram Isayevich; NIKOLENKO, Viktor Filippovich; SOROCHINSKIY, A.M., red.; GALAKTIONOVA, Ye.N., tekhn.red.

[Transportation of long items] Perevozka dlinomernykh gruzov. Moskva, Nauchno-tekhn.izd-vo M-va avtomobil'nogo transp. i shosseinykh dorog RSFSR, 1960. 50 p. (MIRA 14:1)
(Transportation)

ACC NR: AP7006118 SOURCE CODE: UR/0209/67/000/001/0060/0063

AUTHORS: Snitkovskiy, A. (Candidate of geographical sciences); Sorochinskiy, M. (Candidate of geographical sciences); Pshenichner, B.

ORG: none

TITLE: The satellite searches for hurricanes

SOURCE: Aviatsiya i kosmonavtika, no. 1, 1967, 60-63

TOPIC TAGS: meteorologic satellite, LONG RANGE weather forecasting, storm, heat radiation, meteorologic research facility

ABSTRACT: Meteorologic satellites are put into orbits of 600--800 km to relay information and advance warning on the formation and location of hurricanes and cyclones. The satellites also relay information on the distribution of solar energy for long-range weather forecasting and on the distribution of the ultraviolet sector of the solar spectrum for determining ozone content and for studying the optic properties of the atmosphere. Kosmos-122 measures atmospheric radiation, radiation from the earth, elements of radiation balance, and radiation in ranges [illegible] microns and 8--12 microns. Cameras on board take infrared pictures on day and night sides of the earth. Computers reduce the data for a global chart showing distribution of radiation intensity. Plans call for launching additional weather satellites which

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ACC NR: AP7006118

can be maneuvered to designated positions by signals (Polet-1 and Polet-2). Orig. art. has: 1 sketch and 1 photograph.

SUB CODE: 22,04/ SUBM DATE: none

Card 2/2

DEGTEV, G.F.; SAVICH, V.V.; SOROCHINSKIY, M.A.

Mechanized painting of metal articles. Mashinostroenie no.3:81-83 My-Je '62. (MIRA 15:7)

1. Dnepropetrovskiy inzhenerno-stroitel'nyy institut.
(Painting, Industrial--Equipment and supplies)

DEGTEV, G.F.; SAVICH, V.V.; SOROCHINSKIY, M.A.

Automatic painting and frying of parts. Mashinostroitel' no.6: 15-16 Je '62. (MIRA 16:5)
(Painting, Industrial--Equipment and supplies)

SAVICH, V.V.; [illegible], M.A.

Sprayer drive for painting in an electric field. Mashinostroitel' no.1:28 Ja '65. (MIRA 18:3)

SOROCHINSKIY, M.A.

Changes of jet streams in connection with the development of cyclones on February 13-17, 1962. Meteor.i.gidrol. no.9:24-31 S '63. (MIRA 16:10)

1. TSentral'nyy institut prognozov.

SOROCHINSKIY, M.A.

On the tracks of a hurricane. Priroda 53 no.3:118-120 '64.
(MIRA 17:4)

1. TSentral'nyy institut prognozov, Moskva.

L 54034-65 EWT(1)/FCC GW/GS

ACCESSION NR: AT5009165 UR/0000/64/000/000/0052/0060

AUTHOR: Sorochinskiy, M. A. 11 B+1

TITLE: Pressure changes due to geostrophic and actual relative vorticity

SOURCE: AN UzSSR. Institut matematiki. Chislennyye metody prognoza pogody i voprosy sinopticheskoy meteorologii (Numerical methods of weather forecasting and problems in synoptic meteorology). Tashkent, Izd-vo Nauka UzSSR, 1964, 52-60

TOPIC TAGS: geostrophic vorticity, real relative vorticity, atmospheric pressure, numerical forecasting 17

ABSTRACT: The quasi-geostrophicity principle is widely used during the development of methods for numerical weather forecasting. However, in nature, the air particles are not always in equilibrium and the real wind is often significantly different from its geostrophic counterpart. The author compares the values of the actual (January and July of 1960) and geostrophic vorticities at the 300 mb level above the surface centers of cyclones over the entire period of their existence. (A similar study was made earlier by R. E. Pettersen [J. of Meteorol., no. 4, 1957] at the 500 mb level.) He also analyzed pressure changes at the 300 mb level due to vortex advection during the entire development of the cyclone. The correlation coefficient of this study was somewhat smaller than the one

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L 54034-65

ACCESSION NR: AT5009165 O

obtained by Pettersen. The results show that: 1) the difference between the actual and geostrophic vorticity is approximately 44%; 2) the mean square vorticity error from pilot balloon data is half the corresponding geostrophic error; 3) the correlation between the true and calculated pressure change is very small. However, pressure changes due to the vortex component calculated from pilot balloon data are much closer to the true ones than the quantities obtained from the Laplacian of the pressure; and 4) the largest deviations between the calculated and actual pressure changes are observed in stage II when the cyclone is below the high frontal zone containing the largest geostrophic components. Orig. art. has: 16 formulas and 4 tables.

ASSOCIATION: none

SUBMITTED: 140ct64 ENCL: 00 SUB CODE: ES

NO REF SOV: 003 OTHER: 001

Card 2/2

L 29988-65 EWT(1)/FCC AEDC(a)/ASD(a)-5 GW

ACCESSION NR: AP5001816 S/0050/65/000/001/0040/0045

13
12
B

AUTHORS: Sorochinskiy, M. A.

TITLE: Dependence of the intensity of near-earth cyclogenesis on the kinetic energy flux at the level of maximum wind

SOURCE: Meteorologiya i gidrologiya, no. 1, 1965, 40-45

TOPIC TAGS: cyclone, energy distribution, jet stream

ABSTRACT: Since the maximum wind velocity changes considerably along the vertical, it should be proper to consider the kinetic energy reserves in the jet stream, not at the isobaric 300 mb surface (or at any other such surface) but at the level of maximum wind velocity. The author traces the change in kinetic energy flux at this level for a period beginning 24 hours before cyclogenesis and ending with full generation of the cyclone. He plots the changes in kinetic energy during this period and points out that all investigations show cyclogenesis to be accompanied by similar changes in kinetic energy at the level of maximum wind velocity. The energy begins to increase 12-18 hours before formation of the cyclone and reaches a maximum at the instant of complete formation. With growth of the cyclone, the kinetic energy decreases, and a maximum is reached at

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L 29988-65

ACCESSION NR: AP5001816

greatest developement (maximal Laplacian near-surface pressure). The author's investigation shows that a cyclone may be generated on the cold side of the jet stream as well as on the warm side, but the energy will be lower. Orig. art. has: 4 figures and 2 tables.

ASSOCIATION: Tsentral'ny*y institut prognozov (Central Forecasting Institute)

SUBMITTED: 23Mar64 ENCL: 00

SUB CODE: ES NO REF SOV: 003 OTHER: 000

Card 2/2

[redacted], M.A.

[redacted]dy of the terms of the variation equation in the various stages of the development of a cyclone. Trudy TSAO no.146: 55-69 '65. (MIRA 18:9)

ACC NR: AT6032989 SOURCE CODE: UR/2546/66/000/149/0092/0096

AUTHOR: Sorochinskiy, M. A.

ORG: none

TITLE: Slope of the maximum wind surface

SOURCE: Moscow. Tsentral'nyy institut prognozov. Trudy, no. 149, 1966. Rezul'taty ispytaniy razlichnykh sposobov kratkosrochnykh prognozov pogody (Results of analyses of various short-range weather forecasting methods), 92-96

TOPIC TAGS: maximum wind level, jet stream, wind speed, cyclogenesis, ageostrophic wind, WIND PROFILE, CYCLONE

ABSTRACT: Although the angle of slope of the maximum wind surface to the horizon β is very small, it plays an important role in the development of atmospheric processes, especially in jet-stream development. Analysis of 100 profiles of maximum wind levels (vertical sections through the center of a cyclone in the direction of flow) showed that prior to cyclone formation, the surface-level cyclonic disturbance was beneath the rising branch of the jet-stream axis, and in the period from its formation to the maximum development stage, it was beneath the descending branch of the axis. This indicates that there is a connection between changes in the slope

Card 1/2

ACC NR: AT6032989 SOURCE CODE: UR/2546/66/000/149/0092/0096

AUTHOR: Sorochinskiy, M. A.

ORG: none

TITLE: Slope of the maximum wind surface

SOURCE: Moscow. Tsentral'nyy institut prognozov. Trudy, no. 149, 1966. Rezul'taty ispytaniy razlichnykh sposobov kratkosrochnykh prognozov pogody (Results of analyses of various short-range weather forecasting methods), 92-96

TOPIC TAGS: maximum wind level, jet stream, wind speed, cyclogenesis, ageostrophic wind, WIND PROFILE, CYCLONE

ABSTRACT: Although the angle of slope of the maximum wind surface to the horizon β is very small; it plays an important role in the development of atmospheric processes, especially in jet-stream development. Analysis of 100 profiles of maximum wind levels (vertical sections through the center of a cyclone in the direction of flow) showed that prior to cyclone formation, the surface-level cyclonic disturbance was beneath the rising branch of the jet-stream axis, and in the period from its formation to the maximum development stage, it was beneath the descending branch of the axis. This indicates that there is a connection between changes in the slope

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ACC NR: AT6032989

angle of a jet stream and the rate of ground-level cyclone formation.

Results obtained indicate that the angle of slope β is affected only by accelerations in the direction of flow; prior to the formation of a cyclone, there is a continuous buildup of kinetic energy at the maximum wind level; and this contributes to the development of ground-level disturbances into a cyclone. After the cyclone has formed, the kinetic energy of the jet stream is spent in maintaining the cyclone formation, and the total kinetic energy of the maximum wind layer decreases. When the cyclone reaches its maximum, the kinetic energy on the maximum wind level increases since the thermobaric field no longer contributes to further development of the cyclone. Ultimately, the situation returns to one similar to that existing prior to the formation of the cyclone. Thus, surface cyclone formation involves reorganization of the jet-stream system, after which the disturbed equilibrium is restored. [WA-50; CBE No. 12]

SUB CODE: 04/ SUBM DATE: none/ ORIG REF: 001/

Card 2/2

ACC NR: AR6035262 SOURCE CODE: UR/0169/66/000/009/B023/B023

AUTHOR: Sorochinskiy, M. A.

TITLE: Maximum wind surface inclination angle

SOURCE: Ref. zh. Geofizika, Abs. 9B161

REF SOURCE: Tr. Tsentr. in-ta Prognozov, vyp. 149, 1966, 92-96

TOPIC TAGS: wind velocity, jet stream, wind, maximum wind inclination angle, wind surface inclination angle, inclination angle, cyclogenesis, surface boundary layer

ABSTRACT: An analysis is made of the incline of tne surface of maximum wind to the horizon, variations in the angle of inclination as a function of variations in wind velocity components, and the relationship between the angle of inclination of a jet stream and cyclogenesis in the surface boundary layer. [Translation of abstract] [SP]

SUB CODE: 04/

Card 1/1 UDC: 551.553

SOROCHINSKIY, TS.M.

Significance of slow and controlled pneumoencephalography in the diagnosis of cerebral tumors. Vop.neirokhir. 20 no.3:7-12 '56. (MLRA 9:8)

1. Iz otdela neyrorentgenologii Nauchno-issledovatel'skogo instituta neyrokhirurgii Ministerstva zdravookhraneniya USSR.

(BRAIN, neoplasms
diag., pneumoencephalography)

GEYNISMAN, Ya.I., prof.; SOROCHINSKIY, TS.M.; TANANAYKO, P.G.

Delayed and controlled pneumoencephalography in subtentorial tumors [with summary in English, p.54]. Vop.neirokhir. 22 no.6:3-7 N-D '58. (MIRA 12:2)

1. Ukrainskiy nauchno-issledovatel'skiy institut neyrokhirurgii.
(BRAIN NEOPLASMS, diagnosis,
subtentorial, pneumo-encephalography (Rus))

SOROCHINSKIY, TS.M.

Pneumoencephalographic peculiarities of extracerebral and intracerebral tumors. Probl.neirokhir. 4:149-159 '59. (MIRA 13:11)
(ENCEPHALOGRAPHY)
(BRAIN--TUMORS)

GEYNISMAN, Ya.I., prof.; SOROCHINSKIY, TS.M.; DANILENKO, G.S.

Craniography in the diagnosis of brain tumors. Vrach.delo no.8:809-813 Ag '59. (MIRA 12:12)

1. Otdel neyrorentgenologii (zav. - prof. Ya.I. Geynisman) Ukrainskogo instituta neyrokhirurgii.
(BRAIN--TUMORS) (SKULL--RADIOGRAPHY)

SOROCHINSKIY, Ts. M.

Cand Med Sci - (diss) "Retarded and direct pneumoencephalography in tumors of the cerebral hemisphere." Kiev, 1961. 14 pp; (Ministry of Public Health Ukrainian SSR, Crimean State Med Inst imeni I. V. Stalin); 200 copies; free; (KL, 6-61 sup, 240)

SOROCHINSKIY, V.

The working capital of collective farms. Den.i kred. 14 no.2: 22-25 F '56. (MLRA 9:5)
(Collective farms--Finance)